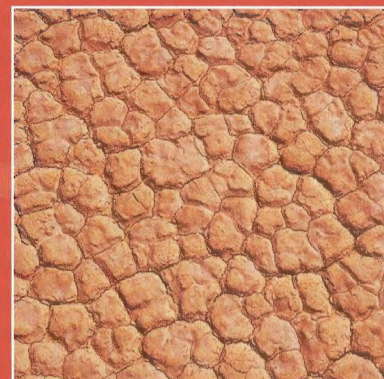


Drought and Desertification in Postage Stamps



WMO

by Garry Toth¹ and Donald Hillger²

Introduction

The Global Framework for Climate Services (GFCS) identifies four initial priority areas: water, food security, health and disaster risk reduction. Drought and desertification (henceforth referred to as D+D) are important issues in all of these areas. Whether due to natural climate variability or climate change, there is an urgent need to develop better D+D management strategies that are based on scientific knowledge, and to ensure broader social responses to manage the risks and mitigate the effects of D+D. Communication and outreach on such issues are key to the success of the GFCS. Philately may be considered by some as outmoded in the world of e-mail and the Internet, but it remains an important means for outreach. In particular, a surprisingly large number of stamps with depictions or themes related to D+D have been issued by countries from around the world. This article examines how D+D have been portrayed on postage stamps and how those stamps have served, in their own way, to educate people on the existence of the problem and on some of the international institutional responses to it.

Philatelists keep track of postage stamps through the information included in various catalogues. In what follows, stamps are identified for the convenience of readers from around the world using numbers from the *Scott* catalogue, published in the United States, and the *Michel* catalogue, published in Germany.

Drought as Depicted on Stamps

Drought can be defined as a prolonged period of abnormally low precipitation which creates a shortage of water for different uses – such as for sanitation and drinking, agriculture, hydrological needs, industry, forests, recreation, cities and power generation. There is no life without water so the impacts of droughts can be significant. Drought is one element of climate, and comes and goes with the natural variability of climate. For example, a large part of North America endured a debilitating drought in the “Dust Bowl” years of the 1930s.

However, it appears that the climate is now changing in various ways as a result of the recent anthropogenic global warming. Scientists are coming to the conclusion that in a warming world, there will be an increased probability of droughts that are more intense and/or of longer duration. It follows that in a warming world, the impacts of droughts will increase as well.

In postage stamps, drought is often represented by a depiction of parched and cracked ground. One example is the United Nations New York *Scott* 968e (*Michel*

Drought and Desertification

WMO is implementing two initiatives to address drought issues: the High-level Meeting on National Drought Policy to be held in collaboration with the UN Convention to Combat Desertification in March 2013 and the Integrated Drought Management Programme with the Global Water Partnership. (For more information see the Concept Paper, November 2011, at www.wmo.int/pages/prog/wcp/drought/idmp/documents/IDMP_Concept_Note.pdf).

¹ Garry Toth, MSc, now retired, worked many years at the Meteorological Service of Canada, garry_toth@hotmail.com

² Don Hillger, PhD, is a research meteorologist with the National Oceanic and Atmospheric Administration (NOAA) and holds a cooperative position at Colorado State University, don.hillger@colostate.edu

1105-1108 minisheet of four), from 2008, one of several sheets of four stamps found in a deluxe stamp booklet that treats the topic of climate change (Figure 1). The "Climate Change" cancellation on that sheet links the desertification theme to the climate change theme. The other two UN postal administrations (Geneva and Vienna) also issued similar booklets. Other stamps include dramatic designs with mention of drought, or refer to drought impacts. Mauritius *Scott 418* (*Michel 410*), from 1976 (Figure 2) is an example of the former category, with its stark illustration of the theme of "Drought in Africa" while Niger *Scott 737* (*Michel 997*), from 1986 (Figure 3) falls in the latter group. Its theme, "trucks of hope", refers to the famine caused by droughts in Africa. Some stamps and postal items relate forest fires to drought. Ivory Coast *Scott 694* (*Michel 792*), issued in 1983 (Figure 4), mentions the "fight against drought" and depicts a dead forest after a fire that occurred, presumably, during a drought. A Trinidad and Tobago 1969 cancellation (Figure 5) states "forest fires cause drought", unfortunately confusing cause and effect: drought can lead to more forest fires, rather than the other way around.

Desertification as Depicted on Stamps

Desertification is a more complex concept than drought, since several factors can contribute to it. A basic working definition is that desertification is the process by which drylands (lands with naturally low amounts of soil water) become even drier and more desert-like, sometimes because of drought, but also at times because of inappropriate land use, agriculture, deforestation, loss of biodiversity or other pressures due to increasing population. Indeed, the human element is at times the principal factor in desertification. Human actions can create desertification of vulnerable land in the absence of a drought, or can feed back to intensify (or, with correct management, to lessen) the impacts of drought. Up to 40 per cent of the Earth's land mass is composed of drylands; the area of Africa just south of the Sahara desert is perhaps the best-known example, but such areas are found around the world.

Stamps related to desertification often mention the term directly or illustrate some of its impacts. For example, what can happen if the land gets very dry? If the land care is inappropriate, or if there is poor erosion control, then, as in the text in Australia *Scott 1267c* (*Michel 1308*) from 1992, "the soil blows away" (Figure 6). In the same vein, a set of four stamps from Transkei from 1984 (*Scott 155-158*, *Michel 163-166*) has for its theme "Save the Soil". The 11c value (Figure 7) illustrates what can happen with bad land use practices: land degradation and possible desertification. The 50c value (Figure 8) show the same scene in which the land has been well-managed.



Figure 1



Figure 2



Figure 3



Figure 4

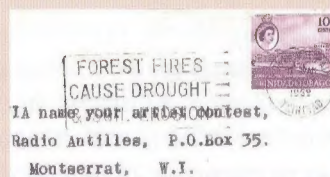


Figure 5



Figure 6



Figure 7



Figure 9



Figure 8

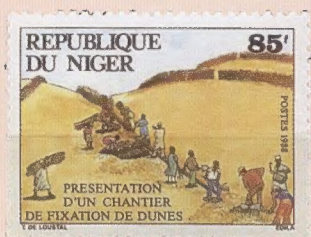


Figure 10



Figure 12



Figure 14



Figure 16



Figure 17



Figure 18



Figure 11



Figure 13



Figure 15

Forests are important: cutting them down is one route to desertification. This is emphasized in many stamps, including Congo Republic Scott 810 (Michel 1136) from 1988, which mentions “stop deforestation” as part of the “fight against desertification” (Figure 9). In countries where the desert is encroaching on dryland areas, some attempts have been made to stabilize the sand dunes to slow them down or stop them. Niger Scott 790 (Michel 1055), issued in 1988, shows one such dune stabilization project (Figure 10). Russia Scott 5967 (Michel 6171), from 1991, shows what used to be the Aral Sea (Figure 11). The waters in the rivers that used to flow into it were diverted for irrigation, and in an extreme example of desertification, it has almost completely dried up.

Drought, Desertification and Water

If there is adequate water then there is no drought, and often there is no desertification either. Some postage stamps take advantage of this contrast to emphasize the problem of D+D. For example, New Caledonia Scott 492 (Michel 723), from 1983, with the theme “water, a vital resource”, contrasts a healthy environment inside a water drop with dying trees and extremely dry conditions in the absence of water (Figure 12). Uruguay Scott 2097 (Michel 2849), issued in 1984, with the theme “water, a scarce resource”, does much the same thing, with a symbolic pond against a background of parched and cracked ground (Figure 13). Other countries chose to focus on international water conferences that dealt with a lack of water such as the World Water Forums, from the first one in Buenos Aires in 1977 through the fifth and most recent in Istanbul in 2009. Stamps have been issued to commemorate both of those conferences.

Drought and Desertification Maps

Maps of regions of D+D are found on some stamps. They draw attention to vulnerable areas and to those that have already suffered. The cachet and cancellation of a first-day cover (FDC) issued by the Geneva office of the UN present a vivid reminder of the areas of Africa that were affected by drought in 1986 (Figure 14). The stamp (UN Geneva Scott 140, Michel 137) sets the scene with its illustration of “Afrique en Crise” (Africa in crisis). In 1977, Iraq issued two stamps (Scott 826-827, Michel 919-920) that highlighted areas of North Africa and the Middle East susceptible to desertification (Figure 15 shows the 30 Iraqi fils stamp in this set). On the other side of the Atlantic, Brazil’s *Caatinga Nordestina* is a dryland in the north eastern part of the country that is at risk for desertification. The region is highlighted in a map in a souvenir sheet of one stamp (SS1) issued in 2002 (Scott 2849, Michel Block 119, Figure 16). Ethiopia Scott 1711 (Michel 1847), from 2006, presents worldwide areas that are susceptible to desertification (Figure 17).

Fundraising for Drought Relief through Semi-Postal Stamps

Many countries gather funds for various causes by issuing postage stamps with surcharges that are in addition to the regular postal face value. A few of them are known to be for drought relief. For example, a series of USSR stamps (*Scott* B14-B23, *Michel* 165-168, 174, 174b, 174c, 175, 175b, 175c, not shown) was issued in 1921 and 1922 to raise money for famine relief in the Volga area (the famine was caused in part by a drought in 1921). More recently (in 1999, no catalogue number), the People's Republic of China issued a postal card with a surcharge (in red at the lower left in Figure 17) for drought relief in parts of the Qinghai province.

Sécheresse-Solidarité africaine

In 1972 and 1973 West Africa suffered through a serious drought, probably the worst since the drought of 1911-1914. Fifteen African countries, mostly in 1973, issued revalued stamps overprinted with the words *Sécheresse-Solidarité africaine* (African solidarity in drought). This was apparently a programme of mutual support and cooperation, though documentation to back this claim could not be found. In any case, the message of cooperation among the affected nations in time of emergency is an important one. Figure 18 shows one such stamp (Mauritania *Scott* 303, *Michel* 462).

The Sahel

The Sahel is an African dryland transition region between the Sahara desert and the savannah grasslands to the south. It has a long history of periods of drought. Harsh droughts in the 1970s and again in the 1980s caused desertification and so led to major famines. Many African stamps were issued in the context of those droughts. For example, Upper Volta *Scott* 538 (*Michel* 793), issued in 1980, shows a green hand symbolically holding back the desert (Figure 19). The phrase "*Opération Sahel Vert*" (Green Sahel Operation) is found in many of the Sahel-related stamps from this period, as reforestation is a common theme in many of these stamps. One example is Senegal *Scott* 431 (*Michel* 594), from 1976 (Figure 20). In 1984 some countries issued revalued stamps overprinted "*Aide au Sahel '84*" (Aid the Sahel '84). An example is Niger *Scott* 668 (*Michel* 915), which also includes the reforestation theme (Figure 21).

International Conferences Related to Drought and Desertification

Many climate conferences have focused on D+D. The Iraq stamp in Figure 15, already referred to for its map,



Figure 20



Figure 21

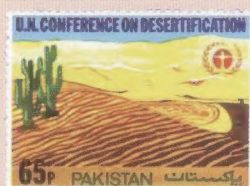


Figure 22



Figure 23



Figure 24



Figure 25

was issued to mark the UN Conference on Desertification held in Nairobi in 1977. It was the first major international conference dedicated to desertification and four countries commemorated the event with postage stamps. Pakistan *Scott* 435 (*Michel* 438) is another example (Figure 22). More recently, in 2003, Cuba *Scott* 4326 (*Michel* 4537) marked the Sixth Session of the Conference of the Parties to the UN Convention to Combat Desertification (UNCCD-COP-6), which was held in Havana (Figure 23). The Convention is an international framework designed to address the problem of desertification, following a recommendation from the Rio Earth Summit of 1992. (As an aside, many postage stamps were issued to commemorate the Rio Summit). One confirmation of the global nature of D+D is that almost 200 countries now belong to the Convention. The UNCCD-COP-10, which took place in South Korea in October 2010, is the most recent desertification conference to be commemorated on a postage stamp (South Korea *Scott* 2371, *Michel* 2841, issued in 2011; see Figure 24).

The World Day to Combat Desertification

Sponsored by the UNCCD, the World Day to Combat Desertification has been celebrated each 17 June since 1995. It is designed to promote public awareness about D+D and to publicize the international efforts to



Figure 26



Figure 27



Figure 28



Figure 29



Figure 30

mitigate their effects. To the authors' knowledge, six countries have issued stamps for the World Day to Combat Desertification. Figure 25 presents a souvenir sheet of one stamp from Brazil (Scott 2592, Michel Block 103) issued in 1996 for the second World Day to Combat Desertification.

The International Year of Deserts and Desertification (IYDD)

The UN General Assembly declared 2006 the International Year of Deserts and Desertification with the goal of creating public awareness of the principal causes of desertification and the threats that it poses. At least 17 countries issued stamps for the event. Mexico Scott 2523 (Michel 3267) shows a desert scene and carries the International Year of Deserts and Desertification logo (Figure 26). Ethiopia issued a set of four stamps (Scott 1708-1711, Michel 1844-1847), three showing various areas around the world that are vulnerable to desertification. Figure 27 presents one of them (Scott 1711/Michel 1847).

Programmes and Agencies Involved in the Fight Against Drought and Desertification

Several programmes and agencies that work in the area of D+D have been commemorated on postage stamps. Ethiopia, hard-hit by droughts over the years, issued a

set of four stamps (Scott 1413-1416, Michel 1539-1542) in 1995 for the 10th anniversary of the Intergovernmental Authority on Drought and Development (IGADD). Figure 28 presents Scott 1413/Michel 1539 from this set, which also includes the theme of deforestation. In another example, UN Geneva Scott 449 (Michel 528), issued in 2005, shows a World Food Programme aircraft dropping supplies to a North African area in need (Figure 29). The theme, "des vivres pour vivre", can be roughly translated as "supplies for survival".

The Science of Drought and Desertification

A few postage stamps refer to the science of D+D. One, a Norway minisheet of two stamps issued in 2009 (Scott 1570, Michel Block 37), states that global warming "sucks moisture out of the soil, leading to increasing desertification". Another, Marshall Islands Scott 678 (Michel Block 24), a souvenir sheet of one stamp issued in 1998, refers to "the unprecedented and devastating drought brought on by El Niño" (Figure 30). We now know that El Niño events have a variety of effects, including above-normal precipitation in the eastern Pacific and below-normal precipitation in the western south Pacific. The very strong 1997-1998 El Niño in fact did cause a drought in some parts of the western south Pacific.

Conclusion

We have seen that a wide variety of themes related to D+D is found in postage stamps. As such, those stamps can be considered to publicize various aspects of D+D: causes, extent, impacts, mitigation programmes and regional and international cooperation. In short, since the 1970s these stamps have served in their own small way as an outreach programme for the public on the subject of D+D.

Will the Global Framework for Climate Services be able to capture this visual means of communicating and reaching out to diverse audiences? This will be up to its members, but as the examples in this article show, one small postage stamp can speak a 1000 words.

The Authors

The authors have researched and written extensively on the subjects of weather, climate, and un-manned satellites on stamps and covers. Their Weather and Climatology philatelic website is found at <http://rammb.cira.colostate.edu/dev/hillger/weather.htm>. A separate page in that site has a complete listing of all known philatelic items related to drought and desertification is found at <http://rammb.cira.colostate.edu/dev/hillger/drought.htm>.